

IN THE SPECIFICATION:

Please replace the paragraph beginning on Page 2, line 4 and ending on Page 2, line 15 with the following:

a In order to solve these problems, a developer comprising at least 0.01 mol/L of at least one compound selected from saccharides, oximes, phenols and fluorinated alcohols as a developing stabilizer and an alkaline agent (that is, silicate-free developer) may be utilized. However, when such developer is used for the conventional presensitized plate for a lithographic printing plate, ~~ed~~ anodized film on an aluminum substrate was dissolved by the developer to result in accumulating of the dissolved material in the developer. Thus produced mud or sludge ~~makes~~ deteriorates the detergency of the automatic developing machine ~~deteriorated~~ and chokes the ~~nozzle~~ of spray nozzles. Further, if a printing plate developed by such developer ~~were was~~ left during developing process, it would be difficult to remove ink that is adhered to (that is so-called "Hochi-yogore" (contamination after being left)).

Please replace the paragraph bridging pages 3 and 4 with the following:

a That is, the present invention provides a preparation method for a lithographic printing plate, which comprises forming a presensitized plate by coating a photosensitive layer or thermosensitive layer on an anodized aluminum substrate treated with an aqueous solution [after anodized] and developing the presensitized plate with a developer comprising no silicate, wherein the aqueous solution comprises at least one compound selected from the group consisting of nitrite group-containing compound, fluorine atom-containing

A2
compound and phosphorous atom-containing compound, in with the proviso that when the at least one compound is fluorine atom-containing compound, the treated aluminum substrate has a surface which satisfies the formula: $0.30 \leq A/(A+B) \leq 0.90$ wherein, A represents peak area of fluorine atom (1S) (counts·eV/sec) determined by X ray Electron Spectroscopy for Chemical Analysis (ESCA), and B represents peak area of aluminum atom (2P) (counts·eV/sec) determined by X ray ESCA, and when the at least one compound is phosphorous atom-containing compound, the treated aluminum substrate has a surface which satisfies the formula: $0.05 \leq A/(A+B) \leq 0.70$ wherein, A represents peak area of phosphorous atom (2P) (counts·eV/sec) determined by X ray ESCA, and B represents peak area of aluminum atom (2P) (counts·eV/sec) determined by X ray ESCA.

Please replace the paragraph bridging pages 9 and 10 with the following:

A3
The coating layer may be formed by contacting an anodized aluminum substrate with an aqueous solution comprising fluorine atom-containing compound such as metal fluoride and inorganic fluorinated compounds. The fluorine atom-containing compound usable in the present invention is selected from the group consisting of metal fluoride, and dihydrogen hexafluorozirconate (hexafluorozirconic acid), dihydrogen hexafluorotitanate (hexafluorotitanic acid), hexafluorosilicic acid, fluorophosphoric acid, and metal or ammonium salt thereof. Specific examples thereof include sodium fluoride, calcium fluoride, potassium fluoride, magnesium fluoride, nickel fluoride, iron fluoride, dihydrogen hexafluorozirconate (hexafluorozirconic acid), potassium hexafluorozirconate, ammonium hexafluorozirconate, sodium hexafluorozirconate, dihydrogen

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hexafluorotitanate (hexafluorotitanic acid), sodium hexafluorotitanate, potassium hexafluorotitanate, ammonium hexafluorotitanate, ~~hexafluosilicic~~ hexafluorosilicic acid, fluorophosphoric acid, ammonium fluorophosphate. The compound can be used alone or in combination. Preferable inorganic fluorinated compounds include sodium fluoride, potassium fluoride, ammonium fluoride and lithium fluoride.

Please replace the paragraph bridging pages 10 and 11 with the following:

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Such phosphates which can be used for the treatment to improve the hydrophilicity of the substrate of the present invention are metal salts of phosphoric acid such as alkali metal salt and alkaline earth metal salt. Specific examples of the phosphates include zinc ~~phosphide~~ phosphate, aluminum phosphate, ammonium phosphate, dibasic ammonium phosphate, monobasic ammonium phosphate, monoammonium phosphate, monopotassium phosphate, monosodium phosphate, potassium dihydrogenphosphate, dibasic potassium phosphate, calcium phosphate, sodium ammonium hydrogenphosphate, dibasic ammonium phosphate, magnesium hydrogenphosphate, magnesium phosphate, ferrous phosphate, ferric phosphate, sodium dihydrogenphosphate, sodium phosphate, dibasic sodium phosphate, lead phosphate, diammonium phosphate, monobasic calcium phosphate, lithium phosphate, phosphotungstic acid, ammonium phosphotungstate, sodium phosphotungstate, ammonium phosphomolybdate, and sodium phosphomolybdate. Also, sodium phosphite, sodium ~~toripolyphosphate~~ tripolyphosphate and sodium pyrophosphate can be included. Preferable examples are sodium dihydrogenphosphate, dibasic sodium phosphate,

af potassium dihydrogenphosphate and dibasic potassium phosphate. These compounds can be used alone or in combination of two or more compounds.

Please replace the paragraph beginning on page 14, line 1, with the following:

RS Phosphorous atom-containing compound usable in the treatment of the substrate in the present invention is selected from the group consisting of phosphoric acid, phosphotungstic acid, phosphomolybdic acid, fluorophosphoric acid, phosphorous acid, hypophosphorous acid, polyphosphoric acid, metaphosphoric acid, and metal or ammonium salt thereof. Metal salts usable in the present invention include salts of alkali metal or alkaline earth metal. More specific examples thereof include zinc ~~phosphide~~ phosphate, aluminum phosphate, ammonium phosphate, dibasic ammonium phosphate, monobasic ammonium phosphate, monoammonium phosphate, monopotassium phosphate, monosodium phosphate, monobasic potassium phosphate, dibasic potassium phosphate, calcium phosphate, sodium ammonium phosphate, dibasic ammonium phosphate, magnesium hydrogenphosphate, magnesium phosphate, ferrous phosphate, ferric phosphate, monobasic sodium phosphate, sodium phosphate, dibasic sodium phosphate, lead phosphate, diammonium phosphate, monobasic calcium phosphate, lithium phosphate, phosphotungstic acid, ammonium phosphotungstate, sodium phosphotungstate, ammonium phosphomolybdate and sodium phosphomolybdate. Further, phosphorous acid, sodium phosphite, disodium hypophosphite, polyphosphoric acid such as diphosphoric acid and triphosphoric acid, sodium polyphosphate such as sodium triphosphate and hexasodium tetrapolyphosphate, hexasodium metaphosphate, sodium pyrophosphate, disodium

Q5 monofluorophosphate, and potassium hexafluorophosphate are also preferred. Preferable examples are monobasic sodium phosphate, dibasic sodium phosphate, monobasic potassium phosphate and dibasic potassium phosphate. Most desirable one is the compound with hexametaphosphate anion, e.g., hexasodium ~~haxemetaphosphate~~ hexametaphosphate (sodium hexametaphosphate). One or more of these compounds can be used.

Please replace the paragraph beginning at page 23, line 4, with the following:

Q6 Most desirable intermediate layer is that comprised of polymer compound comprising acid group and onium group, as shown below. Such intermediate layer may improve the properties relating to remaining of color, remaining of film and contamination without deteriorating the printing durability of the plate. Also, such ~~intermediate~~ intermediate layer may inhibit the formation of mud and sludge in the developer. In addition, when the thermosensitive layer is formed thereon, the sensitivity of the layer may be increased.

Please replace the paragraph beginning at page 32, line 2, with the following:

Q7 In addition, polymer compounds having acid group together with onium group comprises 20 mol % or more, and preferably 40 mol % or more of the unit having acid group and 1 mol % or more and preferably 5 mol % or more of unit having onium group. If the polymer compound contains 20 mol % or more of the unit having acid group, dissolution and ~~removement~~ removal of the non-image area upon alkaline development may be promoted. Also, adherence of the polymer may be improved due to synergistic effect of

acid group and onium group. It is needless to say that two or more kinds of polymers having different units, ratio of constituents, or molecular weight can be used as the polymer compounds having onium group and acid group. Hereinafter, the representative examples of polymer compounds having onium group and acid group will be described. The ratio of constituents shown in the polymer structure means mol percent.

Please replace the paragraph beginning at page 41, line 15, with the following:

Other ~~example~~ examples of preferred o-quinonediazide compound ~~includes~~ include an ester of 1,2-diazonaphthoquinonesulfonyl chloride and ~~phenol~~ formaldehyde ~~phenol-~~ formaldehyde resin as described in U.S. Patent Nos. 3,046,120 and 3,188,210.

Please replace the paragraph bridging pages 42 and 43 with the following:

Also, in place of o-naphthoquinonediazide compound, for example, the following compounds can be utilized as the positive-working photosensitive compound; a polymer compound comprising ~~o-nitrocarbinol~~ o-nitrocarbinol ester group as described in J.P. KOKOKU No. Sho 52-2696, pyridinium group-containing compound (J.P. KOKAI No. Hei 4-365049, etc.), or diazonium group-containing compound (J.P. KOKAI No. Hei 5-249664, J.P. KOKAI No. Hei 6-83047, J.P. KOKAI No. Hei 6-324495, J.P. KOKAI No. Hei 7-72621, etc.). In addition, a combination of a compound which photolytically generates acid (J.P. KOKAI No. Hei 4-121748, J.P. KOKAI No. Hei 4-365043, etc.) and a compound having C-O-C group or C-O-Si group that is dissociated in the presence of acid. Examples of such combination include, for example, a combination of a compound

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that photolytically generates acid and acetal or O, N-acetal compound (J.P. KOKAI No. Sho 48-89003, etc.), a combination with an ortho ester or amide acetal compound (J.P. KOKAI No. Sho 51-120714, etc.), a combination with a polymer having an acetal or a ketal group on the main chain (J.P. KOKAI No. Sho 53-133429, etc.), a combination with an enol ether compound (J.P. KOKAI No. Sho 55-12995, J.P. KOKAI No. Hei 4-19748, J.P. KOKAI No. Hei 6-230574, etc.), a combination with N-acylimino carbon compound (J.P. KOKAI No. Sho 55-126236, etc.), a combination of a polymer having an ortho ester group on the main chain (J.P. KOKAI No. Sho 56-17345, etc.), a combination with a polymer having silyl ester group (J.P. KOKAI No. Sho 60-10247, etc.), and a combination with a silyl ether compound (J.P. KOKAI No. Sho 60-37549, J.P. KOKAI No. Sho 60-121446, J.P. KOKAI No. Sho 63-236028, J.P. KOKAI No. Sho 63-236029, J.P. KOKAI No. Sho 63-276046, etc.). The photosensitive composition may comprise these positive-working photosensitive compound (including the combinations described above) in an amount ranging from 10 to 50% by weight and preferably from 15 to 40% by weight.

Please replace the paragraph beginning at page 46, line 8, with the following:

(10) vinyl esters such as vinyl acetate, vinyl chloro acetate, ~~vinyl butylate~~

10
~~vinylbutyrate~~, and vinyl benzoate,

Please replace the paragraph beginning at page 46, line 16, with the following:

(14) N-vinyl pyrrolidone, N-vinylcarbazole, 4-vinylpyridine, ~~acrylonitril~~

11
~~acrylonitrile~~, ~~methacrylonitril~~ ~~methacrylonitrile~~ and the like.

Please replace the paragraph bridging pages 47 and 48 with the following:

Q12
Further, the photosensitive composition may comprise nonionic surfactant as described in J.P. KOKAI No. Sho 62-251740 and J.P. KOKAI No. Hei 4-68355, amphoteric surfactant as described in J.P. KOKAI No. Sho 59-121044 and J.P. KOKAI No. Hei 4-13149 in order to improve the stability of the composition to the developing condition (that is, latitude for the development). Specific examples of nonionic surfactants include sorbitan tristearate, sorbitan monopalmitate, sorbitan trioleate, ~~stearyl~~ stearyl monoglyceride, polyoxyethylene sorbitan monooleate and polyoxyethylene nonyl phenyl ether and examples of amphoteric surfactants include alkyldi(aminoethyl)glycine, alkylpolyaminoethylglycine hydrochloride, 2-alkyl-N-carboxyethyl-N-hydroxyethyl imidazolinium betaine, an N-tetradecyl-N,N-betaine type surfactant (for example, trade name: Amorgen K, available from Dai-Ichi Kogyo Seiyaku Co., Ltd.), and an alkyl imidazoline type surfactant (for example, trade name: Rebon 15, available from Sanyo Chemical Industries, Ltd.). The content of the foregoing nonionic surfactants and/or amphoteric surfactants in the photosensitive composition preferably ranges from 0.05% to 15% by weight and more preferably 0.1% to 5% by weight.

Please replace the paragraph bridging pages 51 and 52, with the following:

Q13
The photosensitive layer can be obtained by coating on a substrate a solution of the aforementioned photosensitive composition in a solvent capable of dissolving the composition. Examples of solvent utilized in the present invention include γ -butyrolactone, ethylene dichloride, cyclohexanone, methyl ethyl ketone, ethylene

Q13 glycolmonomethyl ether, ethylene glycolmonoethyl ether, 2-methoxyethyl acetate, 1-methoxy-2-propanol, 1-methoxy-2-propyl acetate, toluene, ethyl acetate, methyl lactate, ethyl lactate, dimethylsulfoxide, dimethylacetamide, dimethylformamide, water, N-methylpyrrolidone, ~~tetrahydrofurfuryl alcohol~~ tetrahydrofurfuryl alcohol, acetone, ~~diacetone alcohol~~ diacetone alcohol, methanol, ethanol, isopropanol, diethylene glycol dimethyl ether and the like, and these solvent can be used alone or in combination. Suitable concentration of photosensitive composition (solid content) ranges from 2 to 50% by weight. The coated amount of the photosensitive layer preferably ranges from 0.5 to 4.0 g/m². If the amount is less than 0.5g/m², printing durability of the resulting printing plate will become lowered. If the amount is more than 4.0g/m², although the printing durability improves, sensitivity to light becomes lowered. Also, the photosensitive layer can be formed by many known methods such as coating of a solution of photosensitive composition on a substrate.

Please replace the paragraph beginning at page 52, line 5, with the following:

Q14 The positive-working photosensitive composition may comprise a surfactant. In the photosensitive composition, any surfactant to improve coating procedure, for example fluorine atom-containing surfactant as described in J.P. KOKAI No. Sho 62-170950 can be used. Preferred amount thereof to be added ranges 0.01 to 1% by weight and preferably 0.005 to 0.5% by weight on the basis of the weight of photosensitive composition. Thus obtained lithographic printing plate provides an accurate print of original film, but with ~~inadvantages~~ disadvantages such as defocus and roughness of the printed images. In order

Q14 to prevent the defocus, the surface of the photosensitive layer may be treated to form asperity thereon. For example, J.P. KOKAI No. Sho 61-258255 discloses a method to coat a solution comprising photosensitive composition and particles with the size of several μ meter. But the effect of the method on the defocus is not so sufficient and the roughness of the printed images can not be improved.

Please replace the paragraph beginning at page 62, line 19, with the following:

Q15 (j) N-Vinylpyrrolidone, N-vinylcarbazole, 4-vinylpyridine, ~~acrylonitril~~ acrylonitrile, ~~methacrylonitril~~ methacrylonitrile and the like.

Please replace the paragraph beginning at page 64, line 6, with the following:

Q16 For example, in view of the interaction with component (C) and alkaline soluble polymer compound (B), component (C) can be suitably selected from the group consisting of compounds capable of interacting with the foregoing alkaline soluble polymer compounds, such as ~~sulfon~~ sulfone compound, ammonium salt, phosphonium salt, amide compound and the like.

Please replace the paragraph beginning at page 65, line 11, with the following:

Q17 Specific examples of R^{41} to R^{44} include hydrogen atom, methyl group, ethyl group, phenyl group, dodecyl group, naphthyl group, vinyl group, allyl group, cyclohexyl group and the like and these groups may be optionally substituted. Examples of substituents

a17 include halogen atom, carbonyl group, nitro group, ~~nitrit~~ nitrile group, sulfonyl group, carboxyl group, carboxylic acid ester, sulfonic acid ester and the like.

Please replace the paragraph beginning at page 65, line 17, with the following:

a18 In the formula, R^{45} to R^{50} each independently represents optionally substituted C_{1-12} alkyl group, and specific examples of R^{45} to R^{50} ~~include~~ R^{50} include methyl group, ethyl group, phenyl group, dodecyl group, naphthyl group, vinyl group, allyl group, cyclohexyl group and the like. Further, these group may be optionally substituted. Examples of substituents include halogen atom, carbonyl group, nitro group, ~~nitrit~~ nitrile group, sulfonyl group, carboxyl group, carboxylic acid ester, sulfonic acid ester and the like.

Please replace the paragraph beginning at page 66, line 4, with the following:

a19 Examples of R^{51} to R^{53} include chlorine atom, cyclohexyl group, cyclopentyl ring or cyclohexyl ring (when plural R^{52} are linked together) and these groups may have a substituent. Examples of substituent include halogen atom, carbonyl group, nitro group, ~~nitrit~~ nitrile group, sulfonyl group, carboxyl group, carboxylic acid, sulfonic acid and the like.

Please replace the paragraph beginning at page 66, line 9, with the following:

a20 "m" is "m" is 1 to 8 and preferably 1 to 3.

Please replace the paragraph beginning at page 66, line 14, with the following:

A21
Examples of R⁵⁴ to R⁵⁵ include chlorine atom, cyclohexyl group, cyclopentyl ring or cyclohexyl ring (when plural R⁵² are linked together) and these groups may have a substituent. Examples of substituent include halogen atom, carbonyl group, nitro group, nitri[n]itrile group, sulfonyl group, carboxyl group, carboxylic acid, sulfonic acid and the like.

Please replace the paragraph beginning at page 66, line 19, with the following:

A22
"m" is "n" is 1 to 8 and preferably 1 to 3.

Please replace the paragraph bridging pages 73 and 74 as follows:

A23
The developer comprises, as main components, at least one compound selected from non-reducing sugars and at least one base and has pH in a range of 9.0 to 13.5. Such non-reducing sugar does not comprise free aldehyde group or ketone group and thus, does not show reducing property. Such non-reducing sugar is categorized into trehalose-type oligosaccharides in which reducing groups are connected together, glycosides comprised of saccharides of which reducing group is connected to non-sugar compounds, and sugar alcohols prepared by hydrogenation of saccharides, and every kinds of non-reducing sugar can be suitably used. Examples of trehalose-type oligosaccharides include saccharose saccharose and trehalose. Examples of glycosides include alkyl glycosides, phenol glycosides, mustard oil glycosides and the like. Examples of sugar alcohols include D,L-arabitol, ribitol, xylitol, D,L-sorbitol, D,L-mannitol, D,L-iditol, D,L-talitol, dulcitol and alodulcitol. In addition, examples of non-reducing sugars include maltitol prepared by

Q23
hydrogenation of disaccharides and reductant (reduced glucose) prepared by hydrogenation of oligosaccharides. Among these non-reducing sugars, sugar alcohols and saccharoses are particularly preferred. Further, ~~D-sorbit~~ D-sorbitol, saccharose, reduced glucose are preferred because these compounds indicate buffer action at suitable pH range and are inexpensive. These non-reducing sugars can be used alone or in combination. The amount of the non-reducing sugars on the basis of developer is preferably from 0.1 to 30% by weight and more preferably from 1 to 20% by weight. If the amount is less than said range, sufficient buffer action can not be obtained. If the amount is above the range, it is difficult to concentrate to high concentration and also, the cost would become higher. In addition, when a reducing sugar and a base is used in combination, the color of the resulting developer may change to brown with time and pH of the developer may become gradually lower to result in deteriorating of developability.

Please replace the paragraph bridging pages 80 and 81 as follows:

Q24
The developer may also comprise organic carboxylic acids. Preferred are aliphatic and aromatic carboxylic acids having 6 to 20 carbon atoms. Specific examples of the aliphatic carboxylic acids are caproic acid, enanthic acid, ~~capritic~~ caprylic acid, lauric acid, myristic acid, palmitic acid and stearic acid with the alkanic acids having 8 to 12 carbon atoms being particularly preferred. These aliphatic acids may be unsaturated ones having, in the carbon chain, double bonds or those having branched carbon chains. Examples of aromatic carboxylic acid include benzene ring, naphthalene ring, or anthracene ring having carboxyl group thereon, e.g., o-chlorobenzoic acid, p-

az4
chlorobenzoic acid, o-hydroxybenzoic acid, p-hydroxybenzoic acid, o-aminobenzoic acid, p-aminobenzoic acid, 2,4-dihydroxybenzoic acid, 2,5-dihydroxybenzoic acid, 2,6-dihydroxybenzoic acid, 2,3-dihydroxybenzoic acid, 3,5-dihydroxybenzoic acid, gallic acid, 1-hydroxy-2-naphthoic acid, 3-hydroxy-2-naphthoic acid, 2-hydroxy-1-naphthoic acid, 1-naphthoic acid, 2-naphthoic acid and the like. Especially hydroxynaphthoic acid is effective. The foregoing aliphatic and aromatic carboxylic acids are preferably used in the form of sodium, potassium or ammonium salt for improving the solubility thereof in water. The amount of the organic carboxylic acids used in the developer is not restricted to a particular range. However, if they are used in an amount of less than 0.1% by weight, the desired effect thereof is not anticipated, while if they are used in an amount of more than 10% by weight, any further effect thereof is not anticipated and if other additives are simultaneously used, they interrupt the dissolution thereof. Therefore, the amount of the carboxylic acids preferably ranges from 0.1 to 10% by weight and more preferably 0.5 to 4% by weight on the basis of the total weight of the developer practically used.

Please replace the paragraph beginning at page 81, line 12, with the following:

az5
The developer used in the invention may optionally comprise currently known additives such as preservatives, coloring agents, thickening agents, antifoaming agents, and water softeners. Examples of water softeners include polyphosphoric acids and sodium, potassium and ammonium salts thereof; polyaminocarboxylic acids and salts thereof such as ethylenediaminetetraacetic acid, diethylenetriaminepentaacetic acid, triethylenetetraminehexaacetic acid, hydroxyethylethylenediaminetriacetic acid,

Q25
nitrilotriacetic acid, 1,2-diaminocyclohexanetetraacetic acid and 1,3-diamino-2-propanoltetraacetic acid, and ammonium, potassium and sodium salts thereof; aminotri(methylenephosphonic acid), ethylenediaminetetra(methylenephosphonic acid), diethylenetriaminepenta(methylenephosphonic acid), triethylenetetraminehexa(methylenephosphonic acid), hydroxyethylethylenediaminetri(methylenephosphonic acid) and ~~hydroxyethane-1,1-~~ diphosphonic 1-hydroxyethane-1,1-diphosphonic acid, and ammonium, potassium and sodium salts thereof.

Please replace the paragraph beginning at page 84, line 10, with the following:

Q26
(d) The plate was then continuously roughened using electrochemical method with alternating current of 60Hz. The electrolytic solution used was a solution containing 1% by weight of nitric acid with 0.5% by weight of aluminum ion and 0.007% by weight of ammonium ion at 50°C. The plate was electrochemically grained using an alternating current having a waveform with TP = 2msec (a time till the current value achieves to the peak from zero), duty = 1:1, and a square wave (trapeziform) and using a carbon counter electrode. Ferrite was used as an auxiliary anode. Two electrolytic cells were used.

Please replace Table 2 on page 90 as follows:

Table 2

Ex./ Com. Ex.	1 st bath	2 nd bath	Dev.	Con.	mud- sludge	Printing durability	RC (ΔD)	RF (ΔD)
Ex.	1 Sodium nitrite/1% I	None	A	20	○	50,000	0.01	0.03
	2 ammonium nitrite/0.5%	None	A	21	○	50,000	0.02	0.06
	3 potassium benzoate- benzoate/0.3%	sodium nitrite/0.25%	A	22	○	55,000	0.01	0.03
	4 sodium silicate/0.5%	sodium nitrite/0.5%	A	17	○	50,000	0.03	0.10
	5 purified water	sodium nitrite/1%	A	19	○	50,000	0.02	0.04
	6 sodium silicate/0.01% + sodium nitrite/0.5%	None	A	17	○	45,000	0.03	0.07
	7 sodium nitrite/0.5%	Steam* ¹	A	19	○	50,000	0.01	0.02
	8 sodium nitrite/1% + monobasic ammonium phosphate/0.3%	None	A	20	○	50,000	0.01	0.03
	9 sodium nitrite/1% + potassium benzoate/0.3%	None	A	19	○	50,000	0.01	0.03
	10 sodium nitrite/1% + sodium lauryl sulfate/0.3%	None	A	20	○	50,000	0.01	0.02
	11 sodium nitrite/1% + γ - a m i n o p r o p y l - triethoxysilane/0.1%	None	A	22	○	55,000	0.01	0.03
	12 sodium nitrite/1%	p o t a s s i u m benzoate/0.3%	A	21	○	50,000	0.02	0.04
	13 sodium nitrite/1%	sodium lauryl sulfate/0.3%	A	23	○	55,000	0.02	0.07
	14 sodium nitrite/1%	monobasic ammonium phosphate/0.3%	A	21	○	50,000	0.01	0.03
Com.Ex.	1 sodium sulfate/1%	None	A	34	×	40,000	0.06	0.32
	2 Steam* ¹	None	A	26	×	50,000	0.02	0.05
	3 sodium silicate/0.5%	None	A	18	○	10,000	0.15	0.23
	4 sodium nitrite/1%	None	B	22	Δ	40,000	0.06	0.25

*1 : 100°C, 10 seconds, Dev.: Developer, Con.: Contamination, RC: Remaining of color, RF: Remaining of film,

Please replace the paragraph beginning at page 92, line 11, with the following:

To the reaction mixture, ~~p-aminobenzenesulfonamide~~ p-aminobenzenesulfonamide
(51.7g, 0.30 mol) was added and the mixture was stirred for 1 hour in a oil bath at 79°C.

28
After the completion of the reaction, the mixture was poured into 1L of water with stirring and the stirring was continued for 30 minutes. The reaction mixture was filtered to obtain precipitate in the mixture. The precipitate was poured into a 500 mL of water and the resulted slurry was filtered. Thus obtained solid was dried to give N-(p-aminosulfonylphenyl)metacrylamide as white solid (yield 46.9g).

Please replace the paragraph bridging pages 92 and 93 as follows:

29
In a 20 ml volume of three-neck round bottom flask equipped with an agitator, a condenser and a dropping funnel, N-(p-aminosulfonylphenyl)metacrylamide N-(p-aminosulfonylphenyl)methacrylamide (4.61 g, 0.0192 mol), ethyl methacrylate (2.94 g, 0.0258 mol), acrylonitrile (0.80 g, 0.015 mol) and N,N-dimethylacetamide (20 g) were added. The mixture was heated at 65°C with stirring in a water bath. "V-65" (Wako Pure Chemicals Co. Ltd., 0.15g) was added to the mixture and the mixture was stirred for 2 hours at 65°C under nitrogen flow. To the reaction mixture, further a mixture of N-(p-aminosulfonylphenyl)methacrylamide 4.61g, ethyl methacrylate 2.94g, acrylonitrile 0.80g, N,N-dimethylacetamide 20g and "V-65" 0.15g was dropwise added through the dropping funnel for 2 hours. After the addition was completed, the mixture was further stirred for 2 hours at 65°C. Then 40 g of methanol was added to the mixture and the mixture was cooled. The resulted mixture was poured into 2L of water with stirring. After being stirred for 30 minutes, precipitate was separated by filtration and the precipitate was dried

Q29 to obtain 15 g of white solid. The weight-average molecular weight (polystyrene standard) of the copolymer 1, determined by gel permeation chromatography, was 53,000.

Please replace the paragraph bridging pages 95 and 96 as follows:

Q30 (d) The plate was then continuously roughened using electrochemical method with alternating current of 60Hz. The electrolytic solution used was a solution containing 1% by weight of nitric acid with 0.5% by weight of aluminum ion and 0.007% by weight of ammonium ion at 50°C. The plate was electrochemically grained using an alternating current having a waveform with TP = 2msec (a time till the current value achieves to the peak from zero), duty = 1:1, and a square wave (trapeziform) and using a carbon counter electrode. Ferrite was used as an auxiliary anode. Two electrolytic cells were used.

Please replace the paragraph beginning at page 100, line 3, with the following:

Q31 °C The plate was then continuously roughened using electrochemical method with alternating current of 60Hz. The electrolytic solution used was a solution containing 1% by weight of nitric acid with 0.5% by weight of aluminum ion and 0.007% by weight of ammonium ion at 50°. The plate was electrochemically grained using an alternating current having a waveform with TP = 2msec (a time till the current value achieves to the peak from zero), duty = 1:1, and a square wave (trapeziform) and using a carbon counter electrode. Ferrite was used as an auxiliary anode. Two electrolytic cells were used.